REMARKS

Claims 1, 6, 7, 12, 13, 14, 20-25, and 30-31 have been amended. No claims have been added or cancelled. Therefore claims 1-31 remain pending in the application. Reconsideration is respectfully requested in view of the following remarks.

Claim Objections

The Office Action objected to claims 1, 7, 13, 14, and 20 because of a typographical error in the use of the word "aperiodically." Applicants respectfully note that "aperiodically" is not a typographical error. "Aperiodic" is an English language adjective that may be found in many dictionaries, and "aperiodically" is an adverb form of the adjective "aperiodic." Thus, Applicants respectfully request withdrawal of the objection to the above claims.

Section 112, Second Paragraph, Rejection:

The Office Action rejected claims 1, 6, 7, 12, 13, 14 and 20 under 35 U.S.C. § 112, second paragraph.

The Office Action rejected claims 1, 7, 13, 14 and 20 under 35 U.S.C. § 112, second paragraph because there is insufficient antecedent basis for the limitation "wherein only metadata for static copied data". Applicants respectfully traverse this rejection. However, in order to expedite prosecution, claims 1, 7, 13, 14 and 20 have been amended. Therefore, removal of the § 112 rejection is respectfully requested.

The Office Action rejected claims 6 and 12 under 35 U.S.C. § 112, second paragraph because there is insufficient antecedent basis for the limitation "wherein the background processes." Applicants traverse this rejection as "the background processes" refers to the limitation "one or more background processes" previously introduced in the

claims. However, the claims have been amended to recite "the one or more background processes" for clarity. Therefore, removal of the § 112 rejection is respectfully requested.

The Office Action rejected claims 1, 7, 13, 14, and 20 under 35 U.S.C. § 112, second paragraph for reciting the pronoun "that". Applicants traverse this rejection. "That" is a grammatical word that may be used to indicate somebody or something that has already been mentioned or identified. "That" may be used as a pronoun or as an adjective. In the cited claims, "that" is not used as a pronoun, but as an ***adjective*** indicating type, and in this usage indicates "something that has already been mentioned or identified". In the first usage, "that" is used as an adjective to indicate a "type" of data: *the candidate static data are* ***data*** *[in the file system]* ***that have not been modified for a specified period***. Similarly, in the second usage, "that" is used as an adjective to indicate a "type" of data: *the dynamic data are* ***data*** *[in the file system]* ***that have been created or modified in the specified period***. Therefore, removal of the § 112 rejection is respectfully requested.

In regards to the § 112, second paragraph rejections, Applicants respectfully remind the Examiner that the Statutes and M.P.E.P. allow Applicants leeway in claims language. Applicants refer the Examiner to M.P.E.P. 2173.01 [R-2]:

> Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought...a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

And to M.P.E.P. 2173.02 [R-3]:

> The examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. 112, second paragraph, is **whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available**. When the examiner is satisfied that patentable subject matter is disclosed, and it is apparent to the examiner that the claims are directed to such patentable subject matter, he or she should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness. **Some latitude in the manner of expression**

and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire. Examiners are encouraged to suggest claim language to applicants to improve the clarity or precision of the language used, but **should not reject claims or insist on their own preferences if other modes of expression selected by applicants satisfy the statutory requirement**.

The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:
(A) The content of the particular application disclosure;
(B) The teachings of the prior art; and
(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

Section 101 Rejection:

The Office Action rejected claims 20-25 and 30-31 under 35 U.S.C. § 101 as not limited to tangible embodiments. Applicants respectfully traverse this rejection. However, in order to expedite prosecution, claims 20-25 and 30-31 have been amended to recite a computer-accessible storage medium. Thus, Applicants respectfully request removal of the § 101 rejection.

Section 102(e) Rejection:

The Office Action rejected claims 1-31 under 35 U.S.C. § 102(e) as being anticipated by Colgrove et al. (U.S. patent 7,103,740) (hereinafter "Colgrove"). Applicants traverse the rejection for at least the following reasons.

Colgrove describes a multi-class file system in which more recently modified data may be assigned and/or migrated to higher storage classes and less recently modified data may be migrated at time intervals to lower storage classes in the multi-class file system. The migrated data remains in the file system. Backups of each of the storage classes may

be performed at time intervals. The lower storage classes may include one or more read-only storage classes including less-recently modified data that may be backed up less frequently than higher storage classes including more-recently modified data. (Colgrove, Abstract).

In regard to claim 1, Colgrove does not teach or disclose that "only metadata for static copied data is backed up from the file system to the first-tier backup media", as recited in claim 1. The Examiner refers to Colgrove, col. 28, line 32 to col. 29, line 15. It is unclear if the Examiner is equating Colgrove's "aged data" with "metadata for static copied data" or with the "static copied data" itself. Applicants assume for the sake of argument that the Examiner is equating "aged data" as used by Colgrove with "static copied data." Applicants disagree that Colgrove's "aged data" is equivalent to "static copied data" as recited in claim 1, and also disagree that "aged data" is equivalent to "metadata for static copied data", if that was the Examiner's intent.

In claim 1, static copied data is static data that has been copied to second-tier backups a specified number of times. Only metadata for the static copied data is backed up from the file system to the first-tier backup media. In the Colgrove reference, "aged" data simply refers to data that have been less recently modified, and that thus may be migrated to and stored on a second (or lower) storage class (but still within the multi-class file system). (Colgrove, col. 30, lines 47-52). Colgrove's "aged" data is nowhere described as static data that has been copied to second-tier backups a specified number of times. Nor does Colgrove teach or suggest metadata specifically for what Colgrove refers to as "aged" data (data that have been less recently modified).

Moreover, the Colgrove reference does not teach or suggest, in col. 28, line 32 to col. 29, line 15 or elsewhere, that "only metadata for static copied data is backed up from the file system to the first-tier backup media." In the cited portion, Colgrove is describing the migration of data between storage classes within the multi-class file system. This section is not even describing the backup of the data from the storage classes to backup media. It is not clear to Applicants as to what in this citation the

Examiner is claiming teaches or suggests the notion that "only metadata for the static copied data is backed up from the file system to the first-tier backup media." Applicants can find nothing therein, or elsewhere in the Colgrove reference, that teaches or suggests such a notion.

In the cited section, Colgrove does mention "metadata"; however, this metadata is not the same as the "metadata" recited in claim 1 that is associated with static copied data (candidate static data that has been copied to second-tier backups a specified number of times). **Further, Colgrove does not teach or suggest in the cited portion or elsewhere any situation in which only the "metadata" is backed up to backup media.** The metadata referred to in Colgrove is metadata maintained in the multi-class file system for the data in the various storage classes of the multi-class file system that indicates the locations for the data in the multi-class file system. When data is copied from a read-only storage class to a writeable storage class, the metadata for the data is modified to indicate the new location for the data in the multi-class file system. When data is deleted from a read-only storage class, the data blocks in the read-only storage class may not be overwritten until the next migration of aged data to the read-only storage class. The metadata for the data may be modified to indicate that the data has been deleted. If data that was deleted since the last periodic migration needs to be restored (e.g., from a backup) to a read-only storage class, instead of restoring the data from a backup of the storage class, a block map may be used to "restore" the metadata to indicate that the data is on the read-only storage class (i.e., change its status from "deleted" to "present") at the block locations indicated by the block map. **However, nowhere in the above does Colgrove teach or suggest that "only metadata for static copied data is backed up from the file system to the first-tier backup media."**

Thus, for at least the reasons presented above, the rejection of claim 1 is not supported by the cited prior art and removal thereof is respectfully requested. Similar remarks as those above regarding claim 1 also apply to claims 7, 13, 14 and 20.

In regard to claim 26, Applicants traverse the Examiner's rejection for at least the reasons cited above in regard to claim 1. In addition, the Examiner asserts that Colgrove teaches that "if the file is a static copied file, copy only metadata associated with the static copied file to the first-tier backup media." The Examiner refers to Colgrove, col. 24, lines 40-60 and col. 27, lines 4-17. The first of these citations (col. 24, lines 40-60), which is similar to the citation from Colgrove noted above in regard to claim 1 (col. 28, line 32 to col. 29, line 15), is describing the migration of data between storage classes within the multi-class file system. This section is not even describing the backup of the data from the storage classes to backup media. Applicants' arguments given above for the citation regarding claim 1 apply equally to this citation. **Nowhere in either citation does Colgrove teach or suggest that "only metadata for static copied data is backed up from the file system to the first-tier backup media."**

The second of the Examiner's citations (col. 27, lines 4-17), is simply an introduction to and general description of FIGS. 11A-11D. Applicants can find nothing therein that teaches or suggests that "if the file is a static copied file, copy only metadata associated with the static copied file to the first-tier backup media."

Thus, for at least the reasons presented above, the rejection of claim 26 is not supported by the cited prior art and removal thereof is respectfully requested. Similar remarks as those above regarding claim 1 also apply to claims 28 and 30.

Applicants remind the Examiner that **anticipation** requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. M.P.E.P 2131; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The **identical** invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicants' claimed invention is clearly not anticipated by Colgrove.

Applicants also assert that the claims recite further distinctions over the cited art. However, since the rejections have been shown to be unsupported, a further discussion of such other distinctions is not necessary at this time.

CONCLUSION

Applicants submit the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above-referenced application from becoming abandoned, Applicants hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-21200/RCK.

Also enclosed herewith are the following items:

☐ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Other:

Respectfully submitted,

/Robert C. Kowert/
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